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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,730	08/07/2001	Takeshi Kobayashi	201440-9001	1108

7590

01/11/2006

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Chicago, IL 60611

EXAMINER

ELAHEE, MD S

ART UNIT	PAPER NUMBER
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2645

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/923,730

Applicant(s)

KOBAYASHI, TAKESHI

Examiner

Md S. Elahee

Art Unit

2645

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This action is responsive to an amendment filed 10/24/05. Claims 1-11 are pending.

Response to Arguments

2. Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection which is deemed appropriate to address all of the added limitation at this time.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2 and 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Gorzel (U.S. Patent No. 4,721,962).

Regarding claims 1 and 7, Gorzel teaches a printed circuit board on which a radio unit composed of a transmitter and a receiver is mounted (col.1, lines 38-57, 62-65, col.2, lines 20-22).

Gorzel further teaches a surface [i.e., grounding pattern] of the printed board (fig.1, item 11).

Gorzel further teaches an internal antenna which is classified into an insulating [i.e., dielectric] antenna, and includes a reflector connected with a grounding pattern on the printed circuit board (fig.1, 2; col.3, lines 1-12, 27-47, col.4, lines 15-21).

Gorzel further teaches an antenna metal element which is connected with a feeding point of the internal antenna at an output end thereof, and brought into contact with a feeding terminal formed on the printed board at an input end thereof (col.3, lines 1-12, 27-58).

Gorzel further teaches a front case (col.2, lines 3-10). (Note; front case is inherent for a telephone housing)

Gorzel further teaches a rear case which is provided with a space for accommodating the internal antenna (col.2, lines 3-10). (Note; rear case is inherent for a telephone housing)

Gorzel further teaches that internal antenna is supported between the rear case and the printed circuit board (col.2, lines 3-10, col.3, lines 1-12, 27-47).

Regarding claim 2, Gorzel teaches the space in the rear case for accommodating the internal antenna is a cavity which is fit for the internal antenna (fig.1, 2). (Note; rear case of a housing is inherently for accommodating the internal antenna)

Regarding claim 8, Gorzel teaches an insulator located between the internal antenna and the reflector (col.4, lines 15-21).

Regarding claim 9, Gorzel teaches a connecting terminal connected with the reflecting plane and configured to extend the grounding pattern to the rear case (fig.1, 2). (Note; rear case is inherent for a telephone housing and connecting terminal is also inherent)

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness

or nonobviousness.

7. Claims 3-6, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gorzel (U.S. Patent No. 4,721,962) in view of Pedersen et al. (U.S. Patent No. 5,952,975).

Regarding claim 3, Gorzel further teaches a conductive painting is brought into contact with the surface [i.e., grounding pattern] of the printed board (fig.1, item 11; col.2, lines 52-62).

However, Gorzel does not specifically teach “a conductive painting is applied to a predetermined region of an inner surface of said rear case”. Pedersen teaches a conductive layer [i.e., conductive painting] is applied to a grounded surface [i.e., predetermined region of an inner surface] of the rear case (fig.1-6; col.3, lines 1-10, 25-50, col.4, lines 1-12). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Gorzel to incorporate a conductive painting being applied to a predetermined region of an inner surface of the rear case as taught by Pedersen. The motivation for the modification is to have doing so in order to avoid air gaps between resonant element and the ground plane so that electrical parameters of an antenna won't be changed.

Regarding claim 4, Gorzel teaches that the conductive painting is applied to a region (col.2, lines 52, 53).

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However, Gorzel does not specifically teach “the conductive painting is applied to a region which is opposite said radio unit at least”. Pedersen teaches the conductive layer [i.e., conductive painting] is applied to a region which is opposite the radio unit of antenna 11 at least (fig.2, 4; col.3, lines 40-56). (Note; radio unit is inherent for antenna 11) Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Gorzel to incorporate the conductive painting being applied to a region which is opposite the radio unit at least as taught by Pedersen. The motivation for the modification is to have doing so in order to avoid air gaps between resonant element and the ground plane so that electrical parameters of an antenna won't be changed.

Regarding claims 6 and 11 are rejected for the same reasons as discussed above with respect to claims 1 and 3. Furthermore, Gorzel teaches a radiator situated inside the housing [i.e., rear case] (col.3, lines 1-9).

Gorzel further teaches that a reflector [i.e., reflecting plane] which is situated opposite to the radiator maintaining a predetermined interval therebetween (fig. 1, 2; col.3, lines 1-12).

Gorzel further teaches connecting terminals which connect an edge of the reflector [i.e., reflecting plane] with the conductive painting via contacting means (fig.1, 2; col.3, lines 1-12). (Note; connecting terminals, contacting means are inherent)

Regarding claim 5 is rejected for the same reasons as discussed above with respect to claims 1 and 6.

Regarding claim 10 is rejected for the same reasons as discussed above with respect to claims 3 and 6.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Luxon et al. (US Patent 6,095,820) teach Radiation shielding and range extending antenna assembly.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Md S. Elahee whose telephone number is (571) 272-7536. The examiner can normally be reached on Mon to Fri from 8:30am to 5:00pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on (571) 272-7547. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M.E.

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